

NOTES ON THE NOCTUIDÆ, WITH DESCRIPTIONS OF CERTAIN NEW SPECIES.

BY H. K. MORRISON, CAMBRIDGE, MASS.

Charadra decora, nov. sp.

Expanse 57 mm. Length of body 23 mm.

Eyes hairy. Antennæ simple, black. Abdomen yellowish. Anterior wings white, with the usual markings black, wavy, and distinct; the ordinary lines are marked on the costa by heavy oblique black dashes; half-line present; interior line strongly lobed; the orbicular spot black, figure-eight shaped, very conspicuous; median shade present; the reniform spot large, irregular, open above and below; the exterior and subterminal lines are drawn close together, forming wavy, irregular bands across the wings; at the costa and internal angle the subterminal line forms large black blotches; a series of short terminal black lines on the nervules; fringe white, chequered with black. Posterior wings pure white, with a single heavy oblique black dash at the anal angle. Beneath white.

Hab. California.

This large and beautiful species is closely allied to our three smaller Eastern ones.

The white ground color, the peculiarly shaped orbicular spot, and the black mark at the anal angle of the posterior wings will serve to identify it.

Agrotis badicollis, Grote.

Ammonoconia badicollis, Grote. Bull. Buff. Soc. Nat. Sci., vol. i. p. 136.
Pl. 4, fig. 18 (1873).

We do not think Mr. Grote's reference of this species to *Ammonoconia*, Led., can be followed; the type of that genus, the European *A. cæcimacula*, W. V., is a large, heavy-bodied insect, having a broad massive front, pyramidal-toothed antennæ, and long hairy lashes to the eyes; the species in question has none of these characters, it agrees with the species of *Agrotis* having pectinate antennæ, and is intimately related to the following new species.

Agrotis dilucida, nov. sp.

Expanse 38 mm. Length of body 18 mm.

♂ ♀.—Eyes naked. The antennæ of the male strongly bipecti-

nate. The anterior tibiæ unarmed. The thorax with a slight prothoracic crest. Second joint of the palpus triangular, brown on the sides; the third joint slight and short, and with the upper surface of the second, white and contrasting.

Ground color of the anterior wings cinereous, overlaid with brown; the lines are indicated on the costa by conspicuous oblique brown dashes, below they are simple, brown, and less distinct; half line present; the interior line below the costal dash, perpendicular, strongly lobed; the claviform spot absent; the ordinary spots are almost equal, filled with reddish-brown; in one male specimen the reniform is white and contrasting; the exterior line is dentate, strongly produced around the reniform, below it is obsolete; a series of yellow dots preceded by irregular brown blotches mark the subterminal line; the terminal space more distinctly cinereous.

Posterior wings brownish fuscous, with brownish-yellow fringes; no traces of the discal dots or median line.

Beneath reddish-brown, with discal dots and a distinct common median line.

Hab. New Hampshire.

We have seen three specimens of this fine species captured by Mr. C. P. Whitney, at Milford.

The species is very distinct, the pectinate antennæ of the male and the unarmed anterior tibiæ separate it from almost all the other species of the genus. There is considerable sexual difference in other respects than the antennæ; the males are more purely cinereous, and have the reniform spot white and conspicuous, the yellow subterminal spots are also obsolete (at least in the two specimens we have seen); the females are brown, with the cinereous tint almost entirely confined to the costa and terminal space, the ordinary spots are brown and concolorous, and the subterminal spots are yellow and distinct.

This species approaches M. Guenée's *Noctua elimata*, from Georgia, but it differs in several essential particulars.

Agrotis brocha, Morr.

Agrotis brochus, Morr., Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 163 (1874).

Anterior tibiæ spinose. Sides of the palpi brown, above gray and concolorous with the front. Collar blackish, disconcolorous. Anterior wings gray, having a broad costal band, the terminal space and the neighborhood of the spots suffused with dark brown;

interior line perpendicular, geminate; claviform and orbicular spots absent, the reniform distinct, black with an irregular pale annulus; median shade distinct; the exterior line reduced to a series of black dots on the nervules; terminal space dark-brown. Posterior wings white, with a faint discal dot.

Beneath light gray, with discal dots and traces of the median lines; the basal and median spaces on the anterior wings blackish.

Hab. Colorado, Nebraska.

Our type of this species was defective and rubbed; the recent receipt of several specimens in fine condition enables us to give a complete description.

We consider it our representative of the European *A. corticea*.

Agrotis plagigera, Morr.

Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 163, 1874.

Our type of this species was captured in Colorado; we have since received specimens from other localities which show that it is also found in other Western States. It is allied to *A. 4 dentata* and *A. messoria*, and it is possible that it may ultimately be considered a variety of the former. The ground color of the anterior wings light-gray, slightly tinted in the median space with ochreous; the costa is light and the nervures dark, accompanied by faint whitish shades; the half-line and the median lines are geminate, denticulate, and distinct, the median shade simple, but also distinct; the subterminal line is light, preceded by a series of cuneiform black markings; the terminal space blackish; the spots are all present, the orbicular and reniform large and whitish, with gray annuli, the claviform concolorous, black-edged, and conspicuous.

The posterior wings gray, with a darker diffuse terminal shading.

Hab. Colorado, Kansas, Illinois.

Agrotis redimicula, Morr.

A. redimacula (err.), Morr., Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 165 (1874).

Since describing this species we have obtained specimens from widely separated places which show it to be spread over the Eastern, Middle, and Western States.

The following are some of these localities: Colorado (T. L. Mead); Missouri (C. V. Riley); New York (T. L. Mead); Long

Island (Fred. Tepper); Albany, N. Y. (J. A. Lintner); Boston, Mass. (H. K. Morrison); Maine (A. S. Packard, Jr.).

The specimens show little or no variation; the following are the characters of the species: All the tibiæ spinose; ovipositor of the female slightly extended; the collar with a distinct heavy black line.

Coloration of the anterior wings entirely black, and light and dark cinereous; a very distinct thick basal dash; interior line black, oblique, nearly straight; to it the small black claviform spot is attached; three very conspicuous, equal, light cinereous subcostal spots, the first and second (a basal spot and the orbicular) separated by a clear black, triangular spot, the second and third (the orbicular and reniform) separated by a quadrate spot of the same color; the median shade absent; exterior line black, geminate, preceded by a darkening of the ground color; the subterminal line light, followed by the dark terminal space; the fringe lighter cinereous.

Posterior wings uniform dark fuscous in eastern specimens; in the Coloradan specimens there is a quite distinct terminal dark-gray band.

Beneath gray, not characteristic. On the anterior wings of this species there are three shades of cinereous, the light cinereous of the subcostal spots, the dark cinereous of the terminal and latter half of the median space, and a cinereous shade between the two which prevails over the rest of the wings.

Agrotis rileyana, Morr.

Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 166 (1874).

We have recently received from Mr. Thos. E. Bean, beautiful specimens of both sexes of this rare species, and we improve the opportunity to give a more extended description of it.

It belongs to the group of which *A. messoria*, Harr., is the most common and widely spread member; it differs from this species by the bipectinate antennæ of the male and from all other species of the genus by the coarse rough squamation of the anterior wings; the scales are almost as large as those of *Valeria grotei*, Morr.

The species is stout and robust, and the terminal spines of the anterior tibiæ are very large and heavy; the median lines are simple and distinct; the ordinary spots are black, widely sepa-

rated; the orbicular small, placed close to the interior line; the reniform very large and conspicuous.

The posterior wings are white, with a diffuse gray border, very narrow in the male, in the female wider and extending up the nervules.

The sexes also differ in another particular: in the males the anterior wings are clear gray; in the females the wings are over-spread with ochreous scales which extend over the thorax.

Hab. Illinois, Missouri.

Agrotis gladiaria, Morr.

Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 163 (1874).

This species is allied to the European *A. vestigialis*, Rott.

We have received specimens from St. Catharines, Canada, recently sent us by Mr. George Norman. They were captured May and July, 9.

The antennæ of the male is bipectinate. On the anterior wings the costa in the male is whitish and contrasting, in the female dark and concolorous; a black basal dash; the interior line is only seen below the median nervure, it is then for a short distance quite distinct, and to it is attached the black-lined claviform spot; the orbicular spot is small, the reniform large and dark; the sub-terminal line is preceded by a series of more or less distinct black cuneiform markings; all the nervures are accompanied by pale contrasting shades, more prominent in the males; posterior wings dark fuscous. Beneath nearly uniform grayish fuscous, with traces of the discal dots.

Hab. Mass., Canada.

Argrotis unimacula, Morr.

Proc. Bos. Soc. Nat. Hist., vol. xvii. p. 166 (1874). *A. haruspica*, Grote, Bull. Buff. Soc. Nat. Sci., vol. ii. p. 214 (1875).

Mr. Grote states that our name is preoccupied; this is an error, the name is used by Dr. Staudinger for a simple variety of the common *A. plecta*, Linn.

Since describing *A. unimacula* we have received many other specimens of the species, principally from Messrs. J. A. Lintner and T. L. Mead; the orbicular spot is not always absent, and quite frequently both spots are present.

Mamestra thecata, Morr., nov. sp.

Expanse 32 mm. Length of body 14 mm.

This is a well-marked, comparatively slender-bodied species

related to *M. incincta*, Morr. Eyes hairy. Antennæ simple in both sexes. Thorax with a slight prothoracic tuft, concolorous with the anterior wings. Abdomen short, untufted.

Ground color of the anterior wings light yellowish-gray, almost entirely overspread with blackish, the lighter color appearing principally between the geminate median lines, and in scattered patches on the basal, median, and subterminal spaces; a distinct black basal longitudinal dash; interior line straight, oblique, denticulate, its outer component line black and best expressed; median shade obsolete; ordinary spots unusually small, black, with incomplete ochreous annuli, the reniform followed by a light spot; exterior line black, geminate, its inner component line the most distinct; it is incepted on the costa directly above the reniform spot, boldly produced around it and drawn in below it, narrowing the median space; subterminal line obsolete; a distinct broad light subapical streak; terminal space black, a yellowish line at the base of the concolorous fringe.

Posterior wings whitish, with a discal dot, narrow connected median line and a broad suffuse blackish terminal band; an interrupted black line at the base of the whitish fringe.

Beneath, yellowish white, sprinkled with numerous black atoms; discal dots distinct, as well as a very prominent black median line.

Hab. Glen Valley, near Mt. Washington, N. H., and Plymouth, Mass.

The former specimen was received from Mr. S. H. Scudder, the latter from Mr. Edward Burgess, and was taken July 23, 1867.

The species is quite different in form of markings and color from our other *Mamestræ*, and we think will not be difficult to recognize.

***Oncocnemis meadiana*, nov. sp.**

Expanse 29 mm. Length of body 12 mm.

Eyes naked, with short lashes. Antennæ of the female simple. Abdomen untufted, with a short projecting ovipositor. Tibiæ not spinose, the anterior pair provided with a slender claw at the extremity.

Anterior wings clear bluish-gray, the markings black; interior line regularly arcuate; orbicular spot round, black-ringed, crossed by the median shade, which is straight and oblique; the reniform spot stained with red, incompletely surrounded by a black annu-

lus; the exterior line curves closely around the reniform and is much drawn in below it, thus narrowing the median space; the subterminal line is white, jagged, and irregular, preceded and followed by black stains; a black terminal line, followed by a clear white line at the base of the gray fringe.

Posterior wings white, without discal dots and with a black suffuse terminal border; the nervules are tinged with black; fringe white.

Beneath, the anterior wings are gray, with a few scattered white scales on the costa and terminal margin; posterior wings white, with traces of a black costal and terminal border.

Hab. Colorado, Aug. 18 (No. 47, Mr. T. L. Mead).

Mr. Mead's collection is particularly rich in species of the genus *Oncocnemis*, this being the fifth he obtained in Colorado. We dedicate it to him in recognition of his ability as a collector as well as a student; the specimens obtained on a single summer's tour having furnished material for at least half a dozen long papers by different lepidopterists.

O. meadiana approaches to *O. chandleri*, but it is a much smaller and less robust insect; the terminal band of the posterior wings is not regular and well-defined, but diffuse and extends into the white median space along the nervules.

Hadena suffusca, nov. sp.

Expanse 44 mm. Length of body 19 mm.

Allied to *H. apamiformis*, Guen., and agreeing with that species in its structural characters, excepting that the third palpal joint is perceptibly longer, and that the middle dorsal abdominal tufts are obsolete.

Head and thorax light brown.

Coloration of the anterior wings brown on a light gray ground; the brown tints are strongest on the costa and in the upper part of the median space; along the inner margin and in the subterminal space the ground color prevails; the subterminal line is preceded by a series of brown blotches, and following it the terminal space is tinged with bluish.

The ordinary lines and spots formed as in *H. apamiformis*, except that the interior line extends direct to the inner margin and does not form an outward projection on the submedian nervure.

Posterior wings as in the related species.

Beneath both wings are strongly suffused with brown.

Hab. Mass., Conn., Colorado.

We have been acquainted for some time with a poor specimen of this form from Massachusetts, in the collection of the Boston Society of Natural History, and have considered it a variety of *H. apamiformis*, but the discovery by Mr. T. L. Mead of concordant specimens from Colorado and Connecticut, and the capture by Mr. Moring of several specimens at Nahant, Mass., during the past summer, convinces us that it is distinct from the above species.

The delicate brown tints of the anterior wings will always distinguish it.

Mamestra rufula, nov. sp.

M. brassicæ (Linn.) Grote, Bull. Buff. Soc. Nat. Sci., vol. i. p. 103, and vol. ii. p. 12.

We have compared specimens of our species with a considerable number of examples of the European *M. brassicæ*, and are satisfied that they are distinct from one another, although closely allied *M. rufula* is larger and has the anterior wings comparatively broader; the reniform spot is smaller, rectangular, and better defined; there is a distinct white blotch before the inner angle, followed by a reddish shade; beneath both wings are strongly suffused with reddish-brown, most evident along the costæ.

The latter character is the most conspicuous, although perhaps not the most valuable in separating the species.

We have specimens of the American species from Massachusetts, New York, Illinois, Missouri, and Indiana; it does not appear to be of very rare occurrence, though by no means so common as *M. brassicæ*.

Actinotia derupta, nov. sp.

Expanse 34 mm. Length of body 15 mm.

Eyes naked. Tibiæ unarmed. Thorax smooth and untufted; abdomen also untufted. Anterior wings and thorax yellowish-gray, with brown markings; on the former the ordinary lines and spots are very indistinct and diffuse; a dark brown basal streak, and another similar streak beneath the submedian nervure; a streak extends along the inner margin to the exterior line; the interior line and the claviform and orbicular spots are obsolete; the reniform is present as a distinct but diffuse blackish-brown spot; a series of brown markings along the costa; exterior line

indistinct, formed of sharp internervular indentations; the inner angle yellowish-gray, without brown intermixture.

Posterior wings whitish, iridescent; without markings. Beneath, on the anterior wings, the reniform spot is reproduced, and the nervures are distinctly tinted with blackish-brown.

Hab. Texas, September 21.

This species resembles somewhat the figures of *Phalæna phytolaccæ*, Sm. Abb. (which is still unidentified), but differs in several material points. The figures appear to be coarse and over-colored, so that the species intended will be difficult of determination.

Hadena inordinata, nov. sp.

Expanse 35 mm. Length of body 17 mm.

Eyes naked. Abdomen tufted. Thorax with the usual tufts.

Markings of the anterior wings confused, black, white, and yellowish-brown; a narrow basal dash, and another on the inner margin beneath the submedian nervure; interior line black, geminate and dentate, with a whitish included shade line, extending obliquely outwards to the submedian nervure, then quickly drawn in; claviform spot indistinctly outlined; median spots blackish, with white annuli, the orbicular elongate; the exterior line rounded above, below straight, its included white shade line very distinct; the median space is more or less suffused with yellow-brown; it is most contracted at the submedian nervure, above which the median lines are sometimes connected by a black streak, but this streak is frequently obsolete and its place filled by two short black markings before the exterior line; subterminal line white, with the usual distinct teeth, preceded by a series of very distinct black cuneiform markings; terminal space blackish; a series of black lunules at the base of the checkered fringe.

Posterior wings yellowish-brown, with the costa shaded with gray; discal dots, a distinct narrow median line, and a broad black terminal band.

Beneath, with very conspicuous discal dots on both wings, as well as traces of median and terminal shade bands.

Hab. Massachusetts, in June, from our collection.

This species is allied to *H. cariosa* and *H. sectilis*, but will at once be distinguished by the color of the posterior wings and the arrangement of the black bands thereon.

***Hadena stipata*, nov. sp.**

Expanse 36 mm. Length of body 17 mm.

Sides of the palpi black, the third joint short and barely separated from the second. Abdomen smooth and untufted.

This species is closely allied to *H. cariosa*, but it differs in the important particulars mentioned above, as well as in the color of the posterior wings, which are white with only a faint terminal gray border.

All the nervules are accompanied by deep purple black shades, between which the ground color appears; the ordinary spots are indistinct, but shaped as in *H. cariosa*; the three longitudinal deep black dashes are present as in the former species; the exterior line is also present, but it is white and fine, and is not crossed by the median dash; the lower portion of the median space above the submedian nervure and the terminal space are purple black; the inner margin is clear and light.

Beneath, both wings are white at the base, but suffused with gray atoms outwardly; the discal dots indistinct.

Hab. Illinois. One specimen received from Mr. Thos. E. Bean.

H. stipata is very closely allied to *H. verbascoides* and *H. cariosa*, but we think the characters above mentioned are sufficient to separate it.

The discovery of more specimens will determine its claims to the rank of a good species.

***Hadena paginata*, nov. sp.**

Expanse 24 mm. Length of body 9 mm.

Abdomen smooth and untufted. Form slight. Habitus and markings of *H. rasilis*, Morr., and *H. chalconia*, Hübn.

Ground color of the anterior wings uniform gray, the markings very simple; the median lines are black and simple, the exterior line extends from the inner margin just before the internal angle, obliquely across the wings, turning out, and forming a rounded projection opposite the reniform spot; the interior line extends obliquely to the usual place of the orbicular spot, it then continues irregularly to the costa; the half-line present; the ordinary spots are very small, the orbicular usually obsolete, the reniform whitish; they are connected by a narrow intense black dash, which sometimes encircles the spots, thus uniting together the median lines; the subterminal line obsolete. Posterior wings white, usually crossed by a blackish median line.

Beneath, the anterior wings are blackish, the posteriors white; both are crossed by a common median line.

Hab. Florida (Mr. C. J. Maynard).

This species apparently occurs rather abundantly in the localities where it is found; on this account we have compared it very carefully with M. Guenée's descriptions of *H. festivoidea* and *H. exesa*, which are still unidentified, but it can hardly be either of them.

Mr. Maynard also captured a number of interesting species, several of which have not been recorded from Florida before.

We name a few of them: *Litoprosopus futilis*, G. and R.; *Tarache terminimaculata*, Grote; *Pseudolimacodes niveicostatus*, Grote; *Amolita fessa*, Grote; *Phurys vinculum*, Guen.; *Agrotis incivis*, Guen. (*Anicla Alabamæ*, Grote). We do not think this species should be separated from the other agrotids on account of the scaly clothing of the thorax, several of the European species the thorax likewise scaly, or covered with mingled scales and hair; *Harveya auripennis*, Grote, in this specimen there is no black stain on the inner margin; *Callopietria mollissima*, Guen.; and *Hadena arna*, Guen., the latter species is now for the first time identified in our collections.

***Laphygma inflexa*, nov. sp.**

Expanse 30 mm. Length of body 13 mm.

Eyes naked. Tibiæ unarmed. Head and thoracic parts as in *L. frugiperda*, Sm. Abb. Anterior wings cinereous gray; half-line present; interior line distinct, simple, and angulate; the costa to the exterior line is shaded with white; orbicular and claviform spots absent, the reniform whitish, of medium size, its annulus black and circular; exterior line black and very prominent, it forms a sharp outward projection on the costa; beyond the cell it is straight and below it drawn in, here forming several short sharp indentations; the line is followed by a more or less distinct blackish shade line; subterminal space largely whitish, entirely so at the costa and inner margin; terminal space dark; a black even line at the base of the fringe.

Posterior wings broad, with a well-marked angle at the termination of the third median branch; in color they are whitish, iridescent; the nervules at their termination are tinged with black. Beneath the anterior wings, except along the inner margin, are intense black, without markings; the posteriors are precisely as above, without any traces of the usual discal dots.

Hab. Jacksonville, Fla.

This species can at once be separated from its well-known congener by the form of the posterior wings.

Orthosia ferrugineoides, Guen.

"Species Général," vol. v. p. 398, 1852.

Xanthia ralla, G. & R., Trans. Amer. Ent. Soc., vol. i. p. 346, pl. 7, fig. 49.

Xanthia bicolorago, Guen. vol. v. p. 397, 1852.

We have recently seen specimens determined as *X. ralla*, G. & R.; this confirms our previous opinion (formed from the figure and description) that it was a redescription of the common *O. ferrugineoides*, Guen.

The figure given by Grote and Robinson represents the form in which the ground color is light-yellow and the markings fine and interrupted; it is of common occurrence. The form which we think M. Guenée has described under the name of *bicolorago*, has, on the contrary, the ground color of a darker obscure yellow and all the markings very heavy and black, particularly the median shade; the terminal and the outer part of the subterminal spaces are also entirely black, and the posterior wings are crossed by two distinct median lines.

We have seen specimens in the Museum of Comparative Zoology at Cambridge, in which the whole surface of the anterior wings is overspread with black; these we would also refer to this variety.

Our American species is certainly very near to the European *O. circellaris*, but we have compared a considerable series of them both and find that there are slight but constant differences, enough we think to entitle them to separate designations.

Orthosia perpura, nov. sp.

Expanse 31 mm. Length of body 15 mm.

Eye naked, with lashes. Palpi with the third joint short and stunted. Antennæ of the male pyramidal-toothed. Front and thorax concolorous with the anterior wings. Abdomen short and untufted.

Anterior wings gray, overspread in parts with a peculiar bluish cinereous color; all the markings present, although not very well defined; half-line present; interior line indistinct, from its central lobe proceeds the brown evident claviform spot; the ordinary spots are close together, brown encircled, concolorous, and of nearly equal size; the median shade obsolete and the median

space tinted slightly with brown; the exterior line indistinct, and marked mainly by the slight contrast in color between the median and the cinereous subterminal space; subterminal line brown, formed by a series of connected spots; fringe concolorous with a central brown line.

Posterior wings yellowish fuscous, with a discal lunule.

Beneath yellowish with distinct discal dots and traces of the median line on the costa of both wings.

Hab. New York.

This distinct species can be identified by the color of the anterior wings as well as the yellowish posteriors.

Orthosia differta, nov. sp.

Expanse 28 mm. Length of body 15 mm.

Eyes naked, with hairy lashes. Palpi, front, and thorax as in allied species. Abdomen smooth and untufted.

Anterior wings orange, with the markings disconnected and black; half-line present; interior line distinct, perpendicular, consisting of three broad lobes, it is formed of black spots, connected by a finer black line; claviform spot absent, the orbicular concolorous with a black central dot, and fine black annulus, the reniform also concolorous, with a central blackish blotch, and an interrupted annulus; the median shade forms a black bar above the reniform, which it touches, below it is fine and linear; exterior line of the usual form, denticulate, followed by a blackish shade line which fills in the teeth of the line; the subterminal line an interrupted series of black spots. Posterior wings yellow, with a broad orange terminal band.

Beneath yellow with orange shades, distinct discal dots, and a common median line.

Hab. New York.

Received from my very kind friend, Mr. Fred. Tepper.

Schinia gracilenta, Hübn.

Zutr. vol. i. figs. 5 and 6.

Var. *oleagina*, nov. var.

Expanse 28 mm. Length of body 13 mm.

Eyes naked. Tibiæ spinose, the anterior pair armed with a stout long claw.

Habitus of *S. trifascia* and *S. rectifascia*. Anterior wings uniform olivaceous-gray, the median lines are light, clear, and

distinct, not accompanied by darker shades; the interior line curves outward on the costa and then extends obliquely back, parallel with the exterior line, the latter is oblique and very slightly undulating; the subterminal line also parallel, less distinct, and followed by longitudinal light shades along the nervules.

Posterior wings yellowish-white, with a faint terminal rosy border.

Beneath nearly uniform in tint with traces of terminal reddish borders.

Hab. Texas.

One specimen received from Mr. E. L. Graef, of Brooklyn.

The following are the points of difference between this specimen and Hübner's figures of *S. gracilentia*; they are considerable, but the general resemblance is so great between the forms that we cannot think them specifically distinct, at least until more material is received: in *S. gracilentia* the exterior line is more curved, particularly on the inner margin, the subterminal space is dark and contrasting, the posterior wings have a well-defined gray border instead of a rather faint rosy one, and finally the anterior wings beneath have a distinct discal dot and median line, which are entirely absent in *S. oleagina*.

S. gracilentia is one of Hübner's unidentified species, and is marked unknown on Mr. Grote's recent list.

Schinia tepperi, nov. sp.

Expanse 21 mm. Length of body 8 mm.

Eyes naked. Anterior tibiae absent in the single specimen of the species before us, which is otherwise in good condition; probably they are armed with curved claws as in the other species of the genus. Abdomen short and untufted. Front and thorax with smooth, concolorous, scaly squamation.

Ground color of the anterior wings olivaceous gray; the wings are crossed by three white lines; the first or interior line extends obliquely from the inner margin to the costa; the second or exterior line extends subparallel with the former from the middle of the inner margin toward the apex, but on reaching the fifth subcostal nervule it turns abruptly, reaching the costa at about two-thirds of the distance from the base to the apex; a triangular space extending from this upper portion of the exterior line to the apex is dark olivaceous gray and contrasts with the ground color; the third or subterminal line is as distinct as the other

lines, and extends from the inner margin to the apex, nearly parallel with the outer border; the fringe light; the median nervule is tinged with white, the reniform spot is also faintly seen as a white cross line.

The posterior wings are uniform light olivaceous gray. Beneath the markings are light gray, not at all distinctive.

Hab. Texas. September 15.

We dedicate this species to our friend Mr. Fred Tepper, a careful and enthusiastic student and collector.

It differs materially from *S. rectifascia*, Grote, and from the two unidentified species figured by Hiibner.

Heliothis lucens, nov. sp.

Expanse 27 mm. Length of body 14 mm.

All the tibiæ spinose, the anterior tibiæ with several strong claw terminal-like spines.

Thorax concolorous with the anterior wings; the latter are dark red, thickly overspread with bluish atoms, which give them a very singular and beautiful appearance; the ordinary lines are white, all very distinct and clear; the interior line perpendicular, strongly lobed between the nervules; the exterior line dentate, straight opposite the cell, below it strongly drawn in; subterminal line rivulous; fringe checkered, white and red.

Posterior wings yellow, with a broad central black basal spot and a very broad black terminal band; fringes white.

Beneath yellowish-white, with very distinct markings; on the anterior wings a black basal dash, two median black spots, corresponding to the orbicular and reniform spots, several bright red apical dashes and a broad black terminal band crossed by the light nervules; posterior wings with a conspicuous black discal dot and a double bright red terminal band, which changes before the anal angle into a single broad black band.

Hab. Mass., Nebraska.

Described from one specimen in the collection of the Boston Society of Natural History, and from one in our own collection received from Mr. G. M. Dodge.

This is one of the most beautiful species of a genus remarkable for its brilliant colors.

Tarache patula, nov. sp.

Expanse 15 mm. Length of body 7 mm.

Eyes naked. Clothing of the front and thorax close and scaly.

Form comparatively stout. Anterior wings triangular, with straight costal margin and pointed apices; in color they are light yellow, with ferruginous markings; the latter are very simple, they consist only of broad oblique ferruginous fasciæ; the first fascia extends from the inner margin, about one-third of the distance from the base to the inner angle, to the apex, it gradually decreases in breadth and at the apex becomes linear; the second fascia extends from a point on the inner margin, about two-thirds of the distance from the base to the inner angle, to the apex, it is of nearly equal breadth throughout; the terminal space is shaded with ferruginous.

Posterior wings yellowish, immaculate, except a ferruginous dash on the costa just before the apex of the anterior wings.

Hab. Texas. September 11.

We refer this little species provisionally to this genus; it differs from the typical species in the form of the wings and the peculiar character of the markings. We hesitate to found a new genus on a single specimen.

Tarache crustaria, nov. sp.

Expanse 26 mm. Length of body 12 mm.

Habitus and markings of the European *T. lucida* and *T. luctuosa*, and much larger and stouter than our native species, except *T. terminimaculata*, Grote.

Eyes naked. Legs long and slender, the tibiæ unarmed.

Front and thorax closely scaled as in the allied species. Anterior wings white, much shaded with black; a distinct basal black dash, around which the basal space is shaded with blackish; the ordinary spots are reduced to two distinct black dots; the median space is broad, white, crossed between the spots by a wide blackish band (representing the median shade) extending from the costa to the inner margin; the terminal and subterminal spaces blackish; the exterior line is only indicated by the contrast in color between the spaces; the subterminal line is white, rivulous, most distinct at the costa and internal angle; it is preceded by two small black blotches, one opposite the cell, the other between the second and third median nervules; a conspicuous black blotch at the apex; a series of black dots at the base of the white fringe. Posterior wings black, with indistinct discal dots and with a broad conspicuous white median band, extending from the abdominal margin two-thirds of the distance across the wings.

Beneath white, with discal dots, a narrow common median line and a broad suffuse common subterminal band.

Hab. Nebraska.

Described from material given us by Mr. G. M. Dodge.

This insect is separated from all the North American species of the genus by the black posterior wings, crossed by a single white band; in this particular it resembles the European *T. luctuosa*.

Lithacodia penita, nov. sp.

Expanse 23 mm. Length of body 10 mm.

Habitus and markings of *L. bellicula*, Hübner, to which it is closely allied; it differs in the following particulars: the interior line is strongly outwardly produced beneath the median nervure, the orbicular spot absent, the reniform pure white and very distinct, preceded by a dark brown shading; the exterior line is not followed by a white contrasting shade line as in *L. bellicula*, nor is it angulate beneath the cell; the subterminal line white, very clear at the costa, where it is preceded by a brown shade, below it contrasts with the dark brown terminal space; posterior wings uniform dark gray; beneath, both wings are gray, the posteriors have a median transverse line.

Hab. New York.

One female specimen received from Mr. Fred. Tepper. In this species the ovipositor protrudes, but it is partially concealed by the anal tuft.

L. penita and its ally are related to *Eustrotia* rather than *Jaspidea*.

Remigia texana, Morr.

Remigia var. *texana* Morr., Proc. Bost. Soc. Nat. Hist., vol. xvii. p. 219, 1874.

Since we published our description of this form we have received additional material, and now we think probable that it is distinct from the well-known *R. latipes*, Guen. The median lines are very plain, extending from border to border, and accompanied by lighter shade lines; the orbicular spot is reduced to a white dot; the reniform is black encircled, concolorous, from its base the double, wavy, median shade extends to the inner margin; a series of black subterminal dots.

Expanse 45 mm. *Hab.* Texas.